



# Fact Sheet

US Army Corps of Engineers  
U.S. Army Engineer Research and Development Center

January 2004

Public Affairs Office □ 3909 Halls Ferry Road □ Vicksburg, MS 39180-6199 □ (601) 634-2504 □ <http://www.wes.army.mil>

## Risk Analysis of Coastal Structures

**Purpose:** Develop standardized methods and associated computer programs for life-cycle analysis of coastal rubble mound coastal structures. Create coastal structure-focused web page.

**Background:** As rubble-mound structures degrade, the sedimentation and transmitted wave energy in the lee of the structure increase. This results in increased dredging and unacceptable motion for vessels seeking safe refuge in the lee of the structure. Accurate life-cycle analyses (LCA) are required in order to establish funding priorities for planning, design, and maintenance of these structures. Predicting damage rates over the entire life cycle is central to any LCA and damage formulas have not historically been available. Because both Corps personnel and Corps contractors do not have standardized methods for LCA for new structure design or for maintenance evaluation for existing structures, the uncertainty in such an analysis is unnecessarily high and unpredictable.

**Facts:** Initial products from this research effort have included personal computer programs for predicting the reliability and the life cycle response of rubble mound structures. These design tools provide a significant improvement in the Corps' ability to predict life-cycle costs of coastal rubble mound structures. In addition, an initial version of a web page with general coastal structure design information has been completed. The web page includes electronic versions of Corps publications summarizing the history of all Corps coastal structures. In addition, the web page includes a link to an online database of all Corps coastal projects. These products will be enhanced during this research and distributed through Corps publications, classes, and workshops.



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